PATENT COOPERATION TREATY

Translation

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

	Date of mailing *(day/month/year)*
Applicant's or agent's file reference	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*

International Patent Classification (IPC) or both national classification and IPC

Applicant

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/JP2004/004623

Box No. I **Basis of this opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   ☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

   a. type of material

      ☐ a sequence listing

      ☐ table(s) related to the sequence listing

   b. format of material

      ☐ in written format

      ☐ in computer readable form

   c. time of filing/furnishing

      ☐ contained in the international application as filed.

      ☐ filed together with the international application in computer readable form.

      ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. III **Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. _____

because:

☒ the said international application, or the said claims Nos. _____ relate to the following subject matter which does not require an international preliminary examination (*specify*):

The inventions of claims 19-27 concern treating the human body by therapy (PCT Article 34 (4)(a)(i) and PCT Rule 67.1(iv).

☐ the description, claims or drawings *(indicate particular elements below)* or said claims Nos. _____ are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form
- ☐ has not been furnished
- ☐ does not comply with the standard

the computer readable form
- ☐ has not been furnished
- ☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See Supplemental Box for further details.

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Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-14, 17, 18, 28-31	YES
	Claims	15, 16	NO
Inventive step (IS)	Claims		YES
	Claims	1-18, 28-31	NO
Industrial applicability (IA)	Claims	1-18, 28-31	YES
	Claims		NO

2. Citations and explanations:

The opinion in this report is based on the following documents cited in the international search report.

Document 1: WO 96/36624 A1 (Kyowa Hakko Kogyo Co., Ltd.) & EP 771794 A1
Document 2: WO 01/32127 A1 (SMITHKLINE BEECHAM CORPORATION)
Document 3: WO 01/57036 A1 (PFIZER PRODUCTS, INC.)
Document 4: WO 01/64639 A2 (MERCK FROSST CANADA & CO.)

○Claims 1-14, 17, 18, and 28-31

Document 1 (Example 140) describes the manufacture of the compound represented by Formula (I) of claim 1 in this application, and it states that this compound has PDE IV inhibitory activity and is useful as a medicine. This being the case, when we compare the inventions of the above claims with the invention described in document 1, the former differs from the latter because it is characterized by the fact that it is prepared as a kit and used in combination with a steroid such as budesonide, etc., and COPD, etc., is included as a specific disease.

However, document 2 (Claims and Examples), document 3 (Claims; page 119, line 18 to page 132, line 13) and document 4 (Claims; page 27, line 14 to page 29, last line) state that drugs having PDE IV inhibitory activity are effective in the treatment of asthma and COPD by their combined use with drugs having a steroid scaffold such as budesonide, etc., and these drugs can also be administered separately. This being the case, this examination finds that persons skilled in the art would have no particular difficulty in combining the compound described in document 1 with a steroid drug such as budesonide, etc., to treat asthma and COPD, and that persons skilled in the art can prepare as needed a kit as a separate item for administering both drugs separately.

As a result, based on the descriptions in documents 1-4, the inventions of the above claims lack an inventive step.

○Claims 15 and 16

Document 1 (Example 140) describes the manufacture of the compound represented by Formula (I) of claim 1. In this context, when we compare the inventions of claims 15 and 16 with the invention described in document 1, the former appears to differ from the latter because contains a description of the combined use of the compound with a steroid.

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Box No. VI **Certain documents cited**

1. Certain published documents (Rule 43*bis*.1 and 70.10)

Application No. Patent No.	Publication date *(day/month/year)*	Filing date *(day/monih/year)*	Priority date (valid claim) *(day/month/year)*

2. Non-written disclosures (Rule 43*bis*.1 and 70.9)

Kind of non-written disclosure	Date of non-written disclosure *(day/month/year)*	Date of written disclosure referring to non-written disclosure *(day/month/year)*

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Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1, 3, 5-8, 10, 12-15, 17, and 28-31

These claims describe a "steroid agent" as an active ingredient of a drug, but this description does not define which specific structures of compounds among those having a steroid scaffold are included therein, and this matter is not obvious to persons skilled in the art. In looking at the specification, the range of this term is restricted to those specific items listed in claim 2, and no particular mention is made of any others.

This being the case, this examination finds that the inventions of the above claims are not described in the specification with sufficient clarity to enable an ordinary person skilled in the art to work the invention, and because the descriptions of these claims are not supported by the specification, the descriptions of these claims and in the specification do not satisfy the requirements stipulated in PCT Articles 5 and 6.

Furthermore, because the specification and Claims of this application do not satisfy the specified requirements, the object of inquiry used when preparing this opinion was limited to a reasonable range based on the description in the specification.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of Box V:

However, this examination finds that the inventions of claims 15 and 16 are both inventions concerning a compound, and because this compound was actually manufactured in document 1, there is no clear difference between the two. In addition, as long as the inventions of these claims concern a pharmaceutical preparation, this examination finds that these inventions lack an inventive step for the same reason as claims 1-14, 17, 18, and 28-31.

As a result, based on the description in document 1, the inventions of claims 15 and 16 lack novelty, and based on the descriptions in documents 1-4, these inventions lack an inventive step.